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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,399	06/20/2005	Tsuyoshi Kashima	885A.0003.U1(US)	4399
29683 7590 11/15/2007 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE SHELTON, CT 06484-6212			EXAMINER CASCA, FRED A	
			ART UNIT 2617	PAPER NUMBER
			MAIL DATE 11/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/500,399	KASHIMA, TSUYOSHI	
	Examiner	Art Unit	
	Fred A. Casca	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 8-12 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/15/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al (US 5,946,621) in view of Petty et al (US 6,308,073 B1).

Referring to claim 1, Chheda discloses a node selecting method (abstract) in which a mobile node moving a plurality of nodes dispersedly arranged (Figures 1B) estimates a distance to a candidate node adjacent to the mobile node, and selects a node for next communication (Figures 1-3), characterized in that the mobile node executes:

a first step of specifying, as the candidate node, a node present within a communication zone of the mobile node (col. 1, lines 45-65, col. 2, lines 14-24, "determining the point at which a sector can communicate acceptably with the mobile unit"); a second step of calculating, for each specified candidate node, the number of nodes present within a first region where the communication zone of the mobile node and a communication zone of the candidate node overlap each other (Figures 2-4, col. 9, lines 14-60, "combine individual neighbor sets", "B=number combined rank of neighbor X", "neighbors that are also candidate or active set

members”), and the number of nodes present within second regions where both the communication zones do not overlap (Figure 1, “base station”, “B1”), and estimating distance between nodes (Figures 1-2, and col. 1, lines 22-65, note that estimating distance is inherent in CDMA and other wireless networks especially during the handoff process).

Chheda fails specifically disclose estimating the distance in the format claimed by the applicant.

Petty discloses a system for locating a remote mobile station within an area of a wireless communication system by estimating mobile terminal distances relative neighbor base stations (col. 2, figures 1-3 and 5, and lines 30-57, “to calculate distances to the respective bases stations).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chheda by incorporating the teachings of Petty and consequently providing calculating distance based on the ratio as claimed by applicant, for the purpose of providing a more accurate distance estimation.

Referring to claim 2, the combination of Chheda/Petty disclose the node selecting method according to claim 1, characterized in that the mobile node further executes a fourth step of selecting a node for next communication, on the basis of the estimated distance (Chheda, col. 1, lines 42-56, “handoff”).

Referring to claim 3, Chheda discloses a node selecting method in which a mobile node moving a plurality of nodes dispersedly arranged estimates a distance to a candidate node

adjacent to the mobile node, and selects a node for next communication (abstract and Figures 1-3), characterized in that the mobile node executes:

a first step of specifying a node present within a communication zone of the mobile node (col. 1, lines 45-65, col. 2, lines 14-24, "determining the point at which a sector can communicate acceptably with the mobile unit"); a second step of specifying a designated node out of the neighbor nodes (figures 1-5 and col. 1, lines 42-56, "handoff");

a third step of specifying a next neighbor node present within a communication zone of the designated node (col. 1, lines 42-56, "handoff");

a fourth step of counting a common node number as the number of nodes common to the neighbor node and the next neighbor node (Figures 2-4, col. 9, lines 14-60, "combine individual neighbor sets", "B=number combined rank of neighbor X", "neighbors that are also candidate or active set members");

a fifth step of counting a non-common node number as the number of nodes not common to the neighbor node and the next neighbor node (figures 1, "base station", "B1"), and

a sixth step of estimating a distance between the mobile node and the designated node (Figures 1-2, and col. 1, lines 22-65, note that estimating distance is inherent in CDMA and other wireless networks especially during the handoff process).

Chheda fails specifically disclose estimating the distance in the format claimed by the applicant.

Petty discloses a system for locating a remote mobile station within an area of a wireless communication system by estimating mobile terminal distances relative neighbor base stations (col. 2, figures 1-3 and 5, and lines 30-57, "to calculate distances to the respective bases stations).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Chheda by incorporating the teachings of Petty and consequently providing calculating distance based on the ratio as claimed by applicant, for the purpose of providing a more accurate distance estimation.

Referring to claim 4, the combinations of Chheda/Petty disclose the node selecting method according to claim 3, characterized in that the mobile node further executes a seventh step of selecting a node for next communication, on the basis of the estimated distance (Chheda, col. 1, lines 42-56, "handoff").

Referring to claim 8, the combinations of Chheda/Petty disclose the node selecting method according to claim 1, and further disclose characterized in that neighbor node lists are compared with each other in relation to all nodes present within each region; even a plurality of nodes are counted as one if the plurality of nodes have the same neighbor node list; and the number thus counted is used as the modified number of nodes of the region (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25).

Referring to claim 9, the combinations of Chheda/Petty disclose the node selecting method according to claim 1, and further disclose characterized in that the mobile node executes

the first to third steps at predetermined periods (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 10, the combinations of Chheda/Petty disclose the node selecting method according to claim 3, characterized in that the mobile node executes the first to sixth steps at predetermined periods (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 11, the combinations of Chheda/Petty disclose the node selecting method according to claim 9, characterized in that the predetermined period is changed in accordance with a movement speed of the mobile node (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Referring to claim 12, the combinations of Chheda/Petty disclose the node selecting method according to claim 9, characterized in that the predetermined period is changed in accordance with an arrangement density of the plurality of nodes (Figures 1-5 and col. 1, lines 20-65 and col. 2, lines 15-25, col. 9, lines 14-60).

Allowable Subject Matter

3. Claims 5-7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER